

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Patent Application No. 09/346,930

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) An interface device (IM) directly coupled between a network switch (SSP) ~~of a public intelligent network~~ and a computer telephony integration (CTI) server means (CTS), said interface device (IM) being adapted to directly communicate between a service switching function device (SSF) having a service switching functionality and included within said network switch (SSP) and said CTI server means (CTS).
2. (Previously Presented) The interface device (IM) according to claim 1, wherein said interface device (IM) includes a CTI call handling device (CTICH) adapted to receive from said CTI server means (CTS) a CTI call handling message (CTICHIN), and to perform on a call associated with said CTI call handling message (CTICHIN) at least one CTI call service scenario (CSCEN1).
3. (Previously Presented) The interface device (IM) according to claim 2, wherein said CTI call handling device (CTICH) is further adapted to generate, upon performing said at least one CTI call service scenario, at least one returning CTI call handling message (CTICHOUT2) for delivery to said CTI server means (CTS).

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4. (Previously Presented) The interface device (IM) according to claim 2, wherein said CTI call handling device (CTICH) is further adapted to generate, upon performing said at least one CTI call service scenario (CSCEN1), at least one service request control message (SCRM1) for delivery towards said service switching function device (SSF) within said network switch (SSP).

5. (Previously Presented) The interface device (IM) according to claim 1, wherein said interface device (IM) includes a mapping device (MD) adapted to receive from said service switching function device (SSF) within said network switch (SSP) a public switching call handling message (PSCHin), and to perform on a call associated with said public switching call handling message (PSCHIN) at least one public switching call service scenario (SCEN1).

6. (Previously Presented) The interface device (IM) according to claim 5, wherein said mapping device (MD) is further adapted to generate, upon performing said at least one public switching call service scenario (SCEN1), at least one returning public switching call handling message (PSCHOUT1) for delivery to said service switching function device (SSF) within said network switch (SSP).

7. (Previously Presented) The interface device (IM) according to claim 5, wherein said mapping device (MD) is further adapted to generate, upon performing said at least one public

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switching call service scenario (SCEN1), at least one control message (CM1) for delivery towards said CTI server means (CTS).

8. (Previously Presented) The interface device (IM) according to claim 5, wherein said CTI call handling device (CTICH) is further adapted to receive from said mapping device (MD) a mapping device message (CM1;CM_n+1), and to perform, on a particular call associated to said mapping device message, at least one other CTI call service scenario (CSCEN_i + 1; CSCEN_i + k).

9. (Previously Presented) The interface device (IM) according to claim 8, wherein said CTI call handling device (CTICH) is further adapted to generate, upon performing said at least one other CTI call service scenario (CSCEN_i+1; CSCEN_i+k), at least one other returning CTI call handling message (CTICHOUT_i; CTICHOUT_i1) for delivery to said CTI server means (CTS).

10. (Previously Presented) The interface device (IM) according to claim 8, wherein said CTI call handling device (CTICH) is further adapted to generate, upon performing said at least one other CTI call service scenario (CSCEN_i+ 1), at least one other service request control message (SCRMI+1) for delivery towards said mapping device (MD).

11. (Previously Presented) The interface device (IM) according to claim 5, wherein said mapping device (MD) is further adapted to receive from said CTI call handling device, a CTI

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call handling device message (SCRM1; SCRMI+1), and to perform on a specific call associated to said CTI call handling device message (SCRM1; SCRMI+1), at least one other public switching call service scenario (SCENn+1; SCENn+m).

12. (Previously Presented) The interface device (IM) according to claim 11, wherein said mapping device (MD) is further adapted to generate, upon performing said at least one other public switching call service scenario (SCENn+1; SCENn+m), at least one other returning public switching call handling message (PSCHOUT3; SCHOUT3') for delivery towards said service switching device (SSF).

13. (Previously Presented) The interface device (IM) according to claim 11, wherein said mapping device (MD) is further adapted to generate, upon performing said at least one other public switching call service scenario (SCENn+1), at least one other control message (CMn+1) for delivery towards said CTI call handling device (CTICH).

14. (Previously Presented) The interface device (IM) according to claim 2, wherein said CTI call handling device (CTICH) is further adapted to

- determine the value of the CTI call attributes of said call, upon receiving said CTI call handling message (CTICHIN)
- determine at least one updated value of the CTI call attributes of said call, upon performing said at least one CTI call service scenario (CSCEN1).

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15. (Previously Presented) The interface device (IM) according to claim 5, wherein said mapping device (MD) is further adapted to

- determine the value of the public switching call attributes of said call, upon receiving said public switching call handling message (PSCHIN)
- determine at least one updated value of the CTI call attributes of said call, upon performing said at least one public switching call service scenario (SCEN1).

16. (Previously Presented) The interface device (IM) according to claim 8, wherein said CTI call handling device (CTICH) is adapted to

- determine the value of the CTI call attributes of said particular call, upon receiving said mapping device message
- determine at least one updated value of the CTI call attributes of said particular call, upon performing said at least one other CTI call service scenario.

17. (Previously Presented) The interface device (IM) according to claim 11, wherein said mapping device (MD) is further adapted to

- determine the value of the public switching call attributes of said specific call, upon receiving said CTI call handling device message
- determine at least one updated value of the public switching call attributes of said specific call, upon performing said at least one other public switching call service scenario.

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18. (Previously Presented) The interface device (IM) according to claim 14, wherein
said CTI call handling device (CTICH) is further adapted to receive from said CTI server
means (CTS) a succession of incoming CTI call handling messages including said CTI call
handling message (CTICHIN),

said CTI call handling device (CTICH) further includes first selection means (SM1)
adapted to receive an incoming CTI call handling message of said succession, and to forward
said incoming CTI call handling message to a CTI call service scenario device of a first plurality
of CTI call service scenario devices (CSEN1,...,CSCENI) included within said CTI call
handling device (CTICH), each of said CTI call service scenario devices of said first plurality
being adapted to perform a distinct CTI call service scenario,

said CTI call service scenario device of said first plurality is thereby selected by said first
selection means (SM1) based upon at least one value of the CTI call attributes of the call
associated to said incoming CTI call handling message.

19. (Previously Presented) The interface device (IM) according to claim 15, wherein
said mapping device (MD) is further adapted to receive from said service switching
function device (SSF), a succession of incoming public switching call handling messages
including said public switching call handling message (PSCHIN),

said mapping device (MD) further includes second selection means (SM2) adapted to
receive an incoming public switching call handling message of said succession, and to said

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incoming public switching call handling message to a public switching call service scenario device of a second plurality of public switching call service scenario devices (SCEN1,...,SCENn) included within said mapping device, each of said public switching call service scenario devices of said second plurality being adapted to perform a distinct public switching call service scenario,

 said public switching call service scenario device of said second plurality is thereby selected by said second selection means (SM2), based upon at least one value of the public switching call attributes of the call associated to said incoming public switching call handling message.

20. (Previously Presented) The interface device (IM) according to claim 16, wherein said CTI call handling device (CTICH) is further adapted to receive a succession of incoming mapping device messages including said mapping device message,

 said CTI call handling device (CTICH) further includes a third selection means (SM3) adapted to an incoming mapping device messages of said succession, and to forward said mapping device message to a CTI call service scenario device of a third plurality of CTI call service scenario devices (CSCENI+1,...,CSCENI+k) included within said CTI call handling device (CTICH), each of said CTI call service scenario devices of said third plurality being adapted to perform a distinct CTI call service scenario,

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said CTI call service scenario device of said third plurality is thereby selected by said third selection means (SM3) based upon at least one value of the CTI call attributes of the call associated to said incoming mapping device message.

21. (Previously Presented) The interface device (IM) according to claim 17, wherein
said mapping device (MD) is further adapted to receive a succession of incoming CTI
call handling device messages, including said CTI call handling device message,
said mapping device (MD) further includes fourth selection means (SM4) adapted to
receive an incoming CTI call handling device message of said succession and to forward said
CTI call handling device message to a public switching call service scenario device of a fourth
plurality of public switching call service scenario devices (SCEN_{n+1},...,SCEN_{n+m}) included
within said mapping device, each of said public switching call service scenario devices of said
fourth plurality being adapted to perform a distinct public switching call service scenario,
said public switching call service scenario devices of said fourth plurality is thereby
selected by said fourth selection means (SM4), based upon at least one value of the public
switching call attributes of the call associated to said incoming CTI call handling device
message.

22. (Previously Presented) The interface device (IM) according to claim 20, wherein the
CTI call service scenario's performed by the CTI call service scenario devices of said first

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plurality are substantially different from the CTI call service scenario's performed by the CTI call service scenario devices of said third plurality.

23. (Previously Presented) The interface device (IM) according to claim 21, wherein the public switching call service scenario's performed by the public switching call service scenario devices of said second plurality (SCEN1,..., SCENn) are substantially different from the public switching call service scenario's performed by the public switching call service scenario devices of said fourth plurality (SCENn+1,...,SCENn+m).

24. (Previously Presented) The interface device (IM') according to claim 1, wherein said interface device (IM') is adapted to communicate between a plurality of service switching function devices (SSF, SSF1 ; SSF2, SSF3) including said service switching function device (SSF), and said CTI server means (CTS), each of said service switching function devices having a service switching functionality.

25. (Previously Presented) The interface device (IM') according to claim 1, wherein said interface device (IM') is adapted to communicate between said service switching function device (SSF) and a plurality of CTI server means (CTS, CTS1, CTS2), including said CTI server means (CTS).

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26. (Currently Amended) An apparatus (A) for providing a service to at least one customer (C), said apparatus comprising:

a computer telephony integration (CTI) server means (CTS);

a network switch (SSP) of a public intelligent network including a service switching function device (SSF) having a service switching functionality;

an application programming interface (API) coupling said CTI server means (CTS) to an executable means (EM1,...,EM5), said executable means being adapted to execute said service; and

interface means (IM) directly coupled between said network switch (SSP) and said CTI server means (CTS), said interface means (IM) being adapted to directly communicate between said service switching function device (SSF) of said network switch (SSP) and said CTI server means (CTS).

27. Canceled

28. (Previously Presented) The apparatus according to claim 26, wherein said apparatus further comprises at least one other service switching function device (SSF1, SSF2, SSF3) having a service switching functionality and being coupled to said interface means (IM').

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29. (Previously Presented) The apparatus according to claim 26, wherein said apparatus further comprises at least one other CTI server means (CTS1, CTS2) coupled to said interface means (IM').

30. (New) An interface device (IM) directly coupled between a network switch (SSP) of a public intelligent network and a computer telephony integration (CTI) server means (CTS), said interface device (IM) being adapted to directly communicate between a service switching function device (SSF) having a service switching functionality and included within said network switch (SSP) and said CTI server means (CTS), the interface device (IM) comprises a CTI call handling device (CTICH) adapted to receive from said CTI server means (CTS) a CTI call handling message (CTICHIN) and to perform on a call associated with said CTI call handling message (CTICHIN) at least one CTI call service scenario (CSCEN1), and a mapping device (MD) adapted to receive from ~~and~~ service switching function device (SSF) within said network switch (SSP) a public switching call handling message (PSCHin) and to perform on a call associated with said public switching call handling message (PSCHIN) at least one public switching call service scenario (SCEN1).